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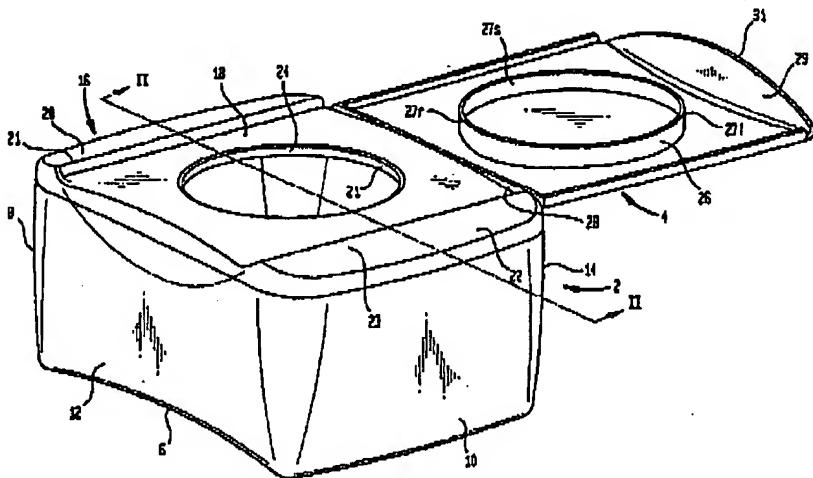
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(54) Title: REFILLABLE TOWELETTE DISPENSING ARTICLE



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(57) Abstract: A dispensing article, particularly for dispensing towelettes, is provided and includes a container body (2) for storing the towelettes and a lid (4) hingedly attached to the body (2). The container is formed from a floor panel (6), left (8) and right (10) side panels, front (12) and rear (14) panels and a deck panel. The deck panel (16) includes a sealing section (18) with a dispensing aperture (24). The sealing section (18) is domed outwardly away from the floor (6). A downwardly projecting plug (26) on an interior surface of the lid (4), in a closed position, engages within the dispensing aperture (24) forming a seal therewith. The domed nature of the sealing section (18) improves the air tight closure and shortens the required length of the plug (26) to minimize aesthetically displeasing sink marks in the plastic wall of the plug.

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REFILLABLE TOWELETTE DISPENSING ARTICLE

The present invention relates to a towelette dispensing container adapted for refill.

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Chemically impregnated pads, sheets and tissues (collectively defined as towelettes) are established articles of commerce. They are generally utilized for personal hygiene, cosmetic purposes and household cleaning 10 applications. Fluid impregnated wipes require packaging which avoids evaporation of solvents. Dry towelettes impregnated with dry chemical coatings (e.g. surfactant compositions) require exclusion of atmospheric moisture during storage periods. Problems arise where a stack of 15 impregnated towelettes are packed together in a common container.

Dispensing of a single item requires resealability of the container to prevent the items from either drying out or 20 absorbing unwanted moisture. Notable advances in the art include the following disclosures:

U.S. Patent 5,647,506 describes a resealable dispenser for delivering interleaved, individual moisture-impregnated 25 tissues from a housing having sufficient rigidity to retain it's shape subsequent to its manufacture. A top wall includes a recess portion provided with an orifice for removing individual tissues from the housing.

30 U.S. Patent 5,379,897 discloses a disposable, compactable package for delivering a stack of tissues. The package may

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be produced as a thermoform. A tabbed resealable label is secured over a bottom area of the package.

U.S. Patent 4,790,436 discloses a resealable dispenser-  
5 container for wet tissues. A deformable pouch containing a stack of the tissues is held rigid with the assistance of a shape maintaining member even after most of the tissues have been dispensed. Suitable shape maintaining members include an outer box surrounding the pouch fixed with an adhesive on  
10 an undersurface of the box roof which prevents pouch wall collapse. A second embodiment is a U-shaped frame inserted within the pouch.

U.S. Patent 5,531,325 describes a pouch for storing  
15 interleaved tissues with a resealable flap opening. The pouch is housed in a rigid outer container which in its closed position is sufficiently air-tight to prevent exchange of air between contents of the container and the outside atmosphere. An anti-slip member such as a glue  
20 strip is attached to the pouch and projects through a hole in the bottom of the container to prevent the latter from slipping on a support surface.

Commercial expressions of towelette packaging art include a  
25 Kao Biore® dispenser of fluid impregnated tissues. An outer relatively rigid case surrounds a relatively soft refill pack of tissues within a flexible foil package. The outer case has a cover portion with top and side walls while a bottom wall is sealably/replaceably snapped onto the  
30 underside of the cover. An aperture for dispensing towelettes and hinged lid is constructed in the top wall of

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the upper cover. Evaporation of moisture requires a tight seal between side walls and bottom wall as well as a sufficient friction seal of the lid against the aperture. It is not always easy to ensure that both types of seals are 5 sufficiently tight. Most especially, the floor wall because of its relatively large sealing perimeter requires great care in closure with the bottom edge of the side walls.

10 A related package with similar structural problems is also commercially in the Japanese market sold under the Silcot trademark.

15 Evident from the foregoing selection of technology is the need for improved, more efficient mechanisms for ensuring good seals to prevent moisture or solvents from transferring in either direction through the seals.

20 Accordingly, the present invention provides a towelette dispenser which can maintain a stack of towelettes hermetically sealed from the atmosphere during extended storage periods, especially after multiple openings for dispensing of individual tissues.

25 The present invention also provides a towelette product with a reusable outer container which after having dispensed most of a stack of towelettes is substantially as efficiently resealable as in its initial fully towelette filled position.

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According to the present invention, there is provided a dispensing article, particularly for towelettes, which comprises:

5 a container body having a floor panel, left and right side panels opposite one another rising from the floor panel, front and rear panels opposite one another rising from the floor panel and a deck panel opposite the floor panel, the deck panel including a sealing section, a dispensing aperture formed in the sealing section, and  
10 wherein the sealing section is domed outwardly away from the floor panel; and

a lid hingedly attached to the body, the lid in a closed position overlying the sealing section.

15 Further, the present invention also provides a towelette product which comprises:

a stack of flexible towelettes; and  
a container body receiving the towelettes and having a floor panel, left and right side panels opposite one another rising from the floor panel, front and rear panels opposite one another rising from the floor panel and a deck panel opposite the floor panel, the deck panel including a sealing section, a dispensing aperture formed in the sealing section, and wherein the sealing section is domed outwardly  
25 away from the floor panel; and

a lid hingedly attached to the body, the lid in a closed position overlying the sealing section.

30 The deck panel is further defined by left and right shoulder sections flanking the sealing section. Upper surfaces of the shoulder sections are landings raised above an upper

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surface of the sealing section. The lid in the closed position deploys form fittingly between the left and right shoulder sections.

5 A plug projects downwardly from an interior surface of the lid. When the lid is in the closed position, the plug overlies the dispensing aperture forming a seal therewith.

10 A rim pocket is formed along a perimeter on an under surface of the deck panel. A complementary rim finger is fashioned along top edges of the left, right, front and rear panels. The rim pocket and finger are reversibly engageable. Refill stacks of towelettes can be loaded into the container body when the deck panel is removed. Subsequent to refilling, 15 the deck panel can be reattached by sealing engagement of the rim pocket and finger.

20 Preferably, at least one of the panels, but more preferably all the panels of the container are sufficiently translucent to allow viewing of the towelette stack. In this manner, it can be determined whether a refill is soon to be required.

25 Further objects, features and advantages of the present invention will become more evident from consideration of the following drawing in which:

- Fig. 1 is a plan perspective view of the dispensing article according to the present invention;
- Fig. 2 is a cross-sectional view along line 2-2 of 30 Fig. 1; and

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- Fig. 3 is a cross-section magnified partial view of area A of Fig. 2 revealing the sealing engagement of the rims.

5 The refillable towelette dispenser of the present invention is provided with an effective seal arrangement. Vapour transfer is controllable to a high degree by the improved configuration. A section of a deck panel containing the towelette dispensing aperture is formed as a domed upwardly 10 bowed area. The dome provides two advantages. Firstly, the dome allows for a better seal than obtainable with a flat configuration. Secondly, the dome permits use of a shorter length plug. Less sink marks from the plastic extrusion process occur with the shorter plug thereby increasing 15 aesthetic appeal.

Fig. 1 illustrates the dispensing article which includes a container body 2 and a lid 4 hingedly attached to the body. The container body has a floor panel 6, left side panel 8, 20 right side panel 10, front panel 12 and rear panel 14. The left and right side panels are opposite one another and rise from the floor panel. Likewise, front and rear panels are opposite one another also rising from the floor panel. A deck panel 16 is opposite the floor and intersects the left, 25 right and side panels. The deck panel includes a sealing section 18 flanked respectively by left and right shoulder sections 20, 22. The sealing section is domed outwardly away from the floor panel.

30 Upper surfaces of the shoulder sections in the form of landings 21, 23 are raised above an upper surface of the

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sealing section. In a closed position, the lid deploys form fittingly between the landings and covers a dispensing aperture 24 formed in the sealing section. Lid 4 on an interior surface is provided with a plug 26 projecting 5 downwardly toward the floor panel. Plug 26 is of circular construction with a diameter slightly smaller than that of the dispensing aperture. The plug has a non-uniform depth to accommodate the domed topography of the sealing section. Sections 27F and 27R of plug 26 are of greater depth being 10 positioned along highest (front and rear) areas of the dome. Sections 27S of plug 26 are of lesser depth being positioned along lowest (side) areas of the dome.

A downwardly projecting circular engagement lip 21 defines 15 the dispensing aperture 24. Areas of lip 21 are of non-uniform depth complementary to the depths of sections 27 of plug 26. In a closed position, the lid through hinge 28 overlies the sealing section with the plug snugly engageable within the aperture ensuring an air tight seal. Tab 29 is 20 fashioned along an outer edge of the lid orthogonal to the under surface protruding away in a direction of the plug. The tab has a leading hemicircular edge 31 engageable against the front panel of the container body.

25 Although not shown, it is possible to additionally include a complementary plug projecting upwardly from the sealing section and circumscribing the dispensing aperture. In a closed position of the lid, both sets of plugs will engage one another to improve seal properties.

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A rim pocket 30 is formed along a perimeter on an under surface of the deck panel. A complementary rim finger 32 is fashioned along top edges of the left, right, front and rear panels. The rim pocket and finger are reversibly engageable 5 with one another to form a seal in an engaged position. Fig. 2 and 3 best illustrate the friction fit arrangement between the deck and other panels.

The deck panel 16 is separable from the container body 6 10 through disengagement of rim finger and pocket. In the disengaged positions, the container body can be restocked with towelettes or similar dispensable articles. Thereafter the deck panel can be replaced over the container body with all seals being re-established.

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CLAIMS

1. A dispensing article comprising:
  - a container body having a floor panel, left and
  - 5 right side panels opposite one another rising from the floor panel, front and rear panels opposite one another rising from the floor panel and a deck panel opposite the floor panel, the deck panel including a sealing section, a dispensing aperture formed in the sealing section, and
  - 10 wherein the sealing section is domed outwardly away from the floor panel; and
  - a lid hingedly attached to the body, the lid in a closed position overlying the sealing section.
- 15 2. The article according to claim 1, wherein the deck panel further comprises left and right shoulder sections flanking the sealing section, upper surfaces of the shoulder sections being landings raised above an upper surface of the sealing section.
- 20 3. The article according to claim 1 or 2, wherein the lid in the closed position deploys form fittingly between the left and right shoulder sections.
- 25 4. The article according to any one of claims 1 to 3, further comprising a plug projecting downwardly from an interior surface of the lid, the plug being engageable with the dispensing aperture in the closed position of the lid.
- 30 5. The article according to any one of claims 1 to 4, further comprising a rim pocket along a perimeter of an

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under surface of the deck panel and a complementary rim finger along top edges of the left, right, front and rear panels, the rim pocket and finger being reversibly engageable and forming a seal in an engaged position.

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6. The article according to any one of claims 1 to 5, wherein at least one of the panels is at least sufficiently translucent to allow viewing of items held within the container body.

10

7. The article according to claim 4 wherein the plug has a non-uniform depth to accommodate topography of the domed sealing section.

15. 8. A towelette product comprising:

a stack of towelettes; and

a container body receiving the towelettes and having a floor panel, left and right side panels opposite one another rising from the floor panel, front and rear panels opposite one another rising from the floor panel and a deck panel opposite the floor panel, the deck panel including a sealing section, a dispensing aperture formed in the sealing section, and wherein the sealing section is domed outwardly away from the floor panel; and

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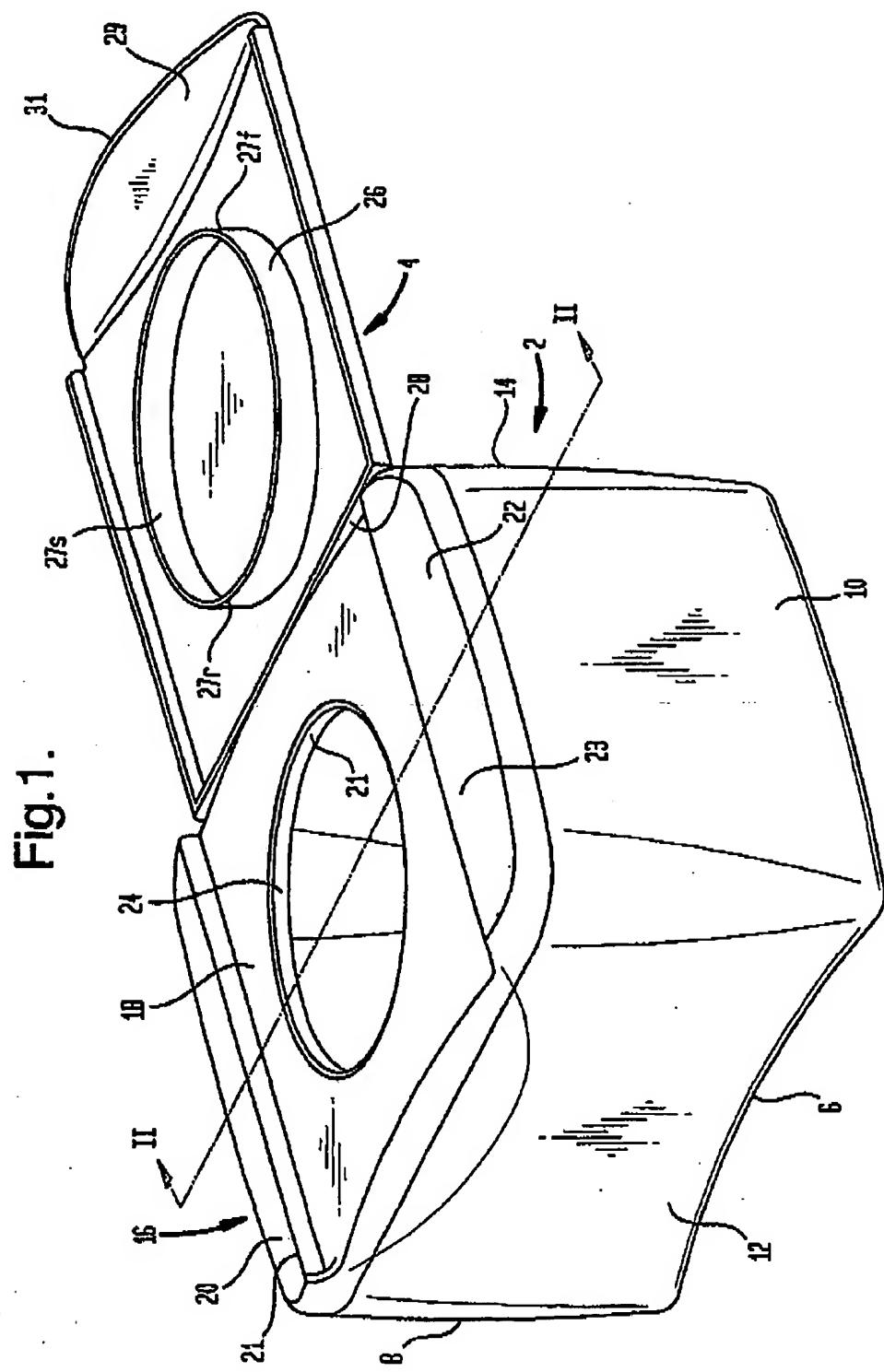
25 a lid hingedly attached to the body, the lid in a closed position overlying the sealing section.

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Fig.2.

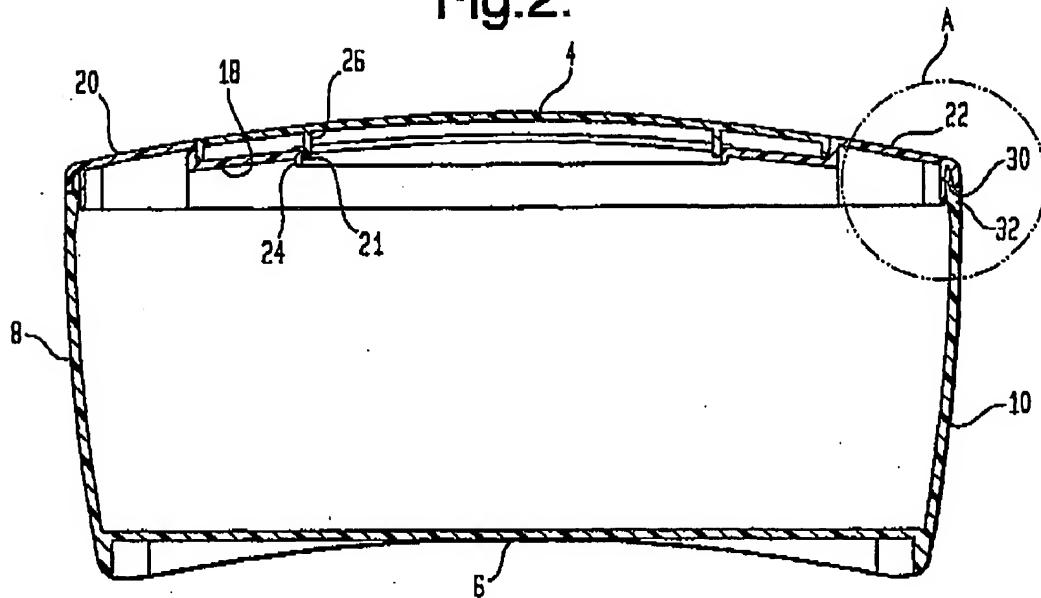
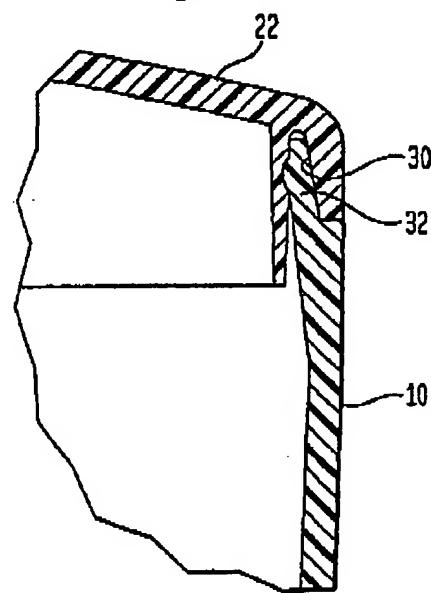


Fig.3.



## INTERNATIONAL SEARCH REPORT

Ind.  National Application No  
 PCT/EP 01/03096

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 B65D83/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category <sup>a</sup>	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	US 6 102 247 A (CRAWFORD DENNIS L) 15 August 2000 (2000-08-15) column 2, line 14 - line 44; figures	1, 8
A	US 3 967 756 A (BARISH ROBERT A) 6 July 1976 (1976-07-06) column 1, line 28 - line 57; figure 2	1-8
A	US 4 535 912 A (BONK JOSEPH P) 20 August 1985 (1985-08-20) column 2, line 43 -column 3, line 19; figures	1-8
A	US 5 699 912 A (KENMOCHI YASUHIKO ET AL) 23 December 1997 (1997-12-23) column 1, line 40 -column 3, line 10; figure 14	1-8
	—/—	

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

## \* Special categories of cited documents :

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Date of the actual completion of the International search

20 August 2001

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Int'l Application No.  
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 297 05 720 U (NESTLE DEUTSCHLAND AG) 5 June 1997 (1997-06-05) page 7, paragraph 1 -page 8, paragraph 2; figures 6,8	1-8

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PAGE 20/21 \* RCVD AT 6/20/2005 10:22:18 AM [Eastern Daylight Time] \* SVR:USPTO-EFXRF-1/0 \* DNIS:8729306 \* CSID:920 721 0279 \* DURATION (mm:ss):05:16

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Information on patent family members

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